

CLAIMS

1. An apparatus (1) for measuring a small quantity  
5 of a liquid, for example, in connection with a medical di-  
agnostic test, comprising at least one chamber (2) for re-  
ceiving the liquid, which chamber (2) comprises a bottom  
(3) and upright side walls (4) and at least two electrodes  
(5) to connect to a voltage source and a measuring system  
10 for determining the electrical impedance between the elec-  
trodes, characterized in that the electrodes are substan-  
tially incorporated in the bottom (3) of the chamber (2),  
allowing the electrical impedance of the liquid itself to  
be determined.

15 2. An apparatus according to claim 1, characterized  
in that the bottom (3) of the chamber (2) is substan-  
tially formed by a glass substrate (9).

20 3. An apparatus according to claim 2, characterized  
in that the electrodes (5) are provided on the glass  
substrate (9), and are embedded in an insulation layer  
(10) provided on the glass substrate (9).

25 4. An apparatus according to any one of the claims  
1-3, characterized in that the upright side walls (4) are  
formed by etching insulation material provided on the in-  
sulation layer (10).

5. An apparatus according to claim 1, characterized  
in that the bottom (3) of the chamber (2) is substan-  
tially formed by a silicon wafer (6).

30 6. An apparatus according to claim 5, characterized  
in that the silicon wafer (6) is provided with a  
first insulation layer (7), preferably of SiO<sub>2</sub>.

35 7. An apparatus according to any one of the claims  
4-6, characterized in that the electrodes (5) are provided  
on the first insulation layer (7) of the silicon wafer (6)  
and are embedded in a second insulation layer (8), pref-  
erably Si<sub>x</sub>N<sub>y</sub>, which is provided on the first insulation  
layer (7).

8. An apparatus according to any one of the claims 4-7, **characterized** in that the upright side walls (4) are formed by etching insulation material provided on the second insulation layer (8).

5 9. An apparatus according to one of the preceding claims, **characterized** in that the chamber (2) is equipped to receive liquid up to an amount of maximally 2 nanolitres.

10 10. An apparatus according to any one of the claims 1-9, **characterized** in that the same comprises a plurality of chambers (2) arranged in an array.

11. A method for measuring a quantity of liquid using an apparatus according to one of the preceding claims, **characterized** in that the voltage source is an alternating voltage source having a frequency of at least approximately 15 kHz.